

Texas Health and Human Services Commission

Tarek Bou-Saada
Energy Manager

June 15, 2011



Background

- Over \$15 million in energy projects over 9 years through SECO's LoanSTAR program
 - Included lighting, air-conditioning/heating, motors, energy management control systems
- Consulting services provided
 - Owner's representative
 - Commissioning work
 - Technical expertise



Challenges

- Funding
 - 12% statewide budget cut
 - Efficiency mandates
 - Funding for repair/replacement reduced from \$72 million to \$35 million
- Liabilities
 - Deferred repairs/replacement: >\$250 million
- Organizational
 - Geographic – HHSC covers Texas
 - O&M Staffing
 - Utilities - regulated/unregulated,
 - 7 electricity,
 - 7 natural gas



Solution

- Energy Savings Performance Contract (ESPC)
 - 10 year straight line payback
 - Includes Measurement & Verification
- Procurement Process
 - Request for Qualifications
 - Detailed selection process
- Contract Development
 - Detailed utility audit contract
 - Implementation contract
 - Each phase carefully reviewed



Implementation

	# of sites	Completion	Cost (\$M)	Savings (\$M/yr)
Phase I	5	Construction -100%	\$13.9	\$1.5
Phase II	5	Construction - 100%	\$11.5	\$1.2
Phase III	5	Construction - 100%	\$13.1	\$1.4
Phase IV	3	Construction - 100%	\$11.4	\$1.2
Phase V	3	Construction - 100%	\$12.1	\$1.3
Phase VI	4	Construction -100%	\$5.2	\$0.6
Phase VII	3	Construction - 100%	\$7.4	\$0.8



Detailed M&V

- Measurement and Verification for Each Phase
 - Option A used for whole campus water project
 - Option B used for continuous batch washers
 - Option C used for whole campus metering
- M&V costs Averaging 5%
 - 10 to 30% of the savings decrease over time
 - 15 year guarantee period
 - Without M&V, large amount of savings may not materialize



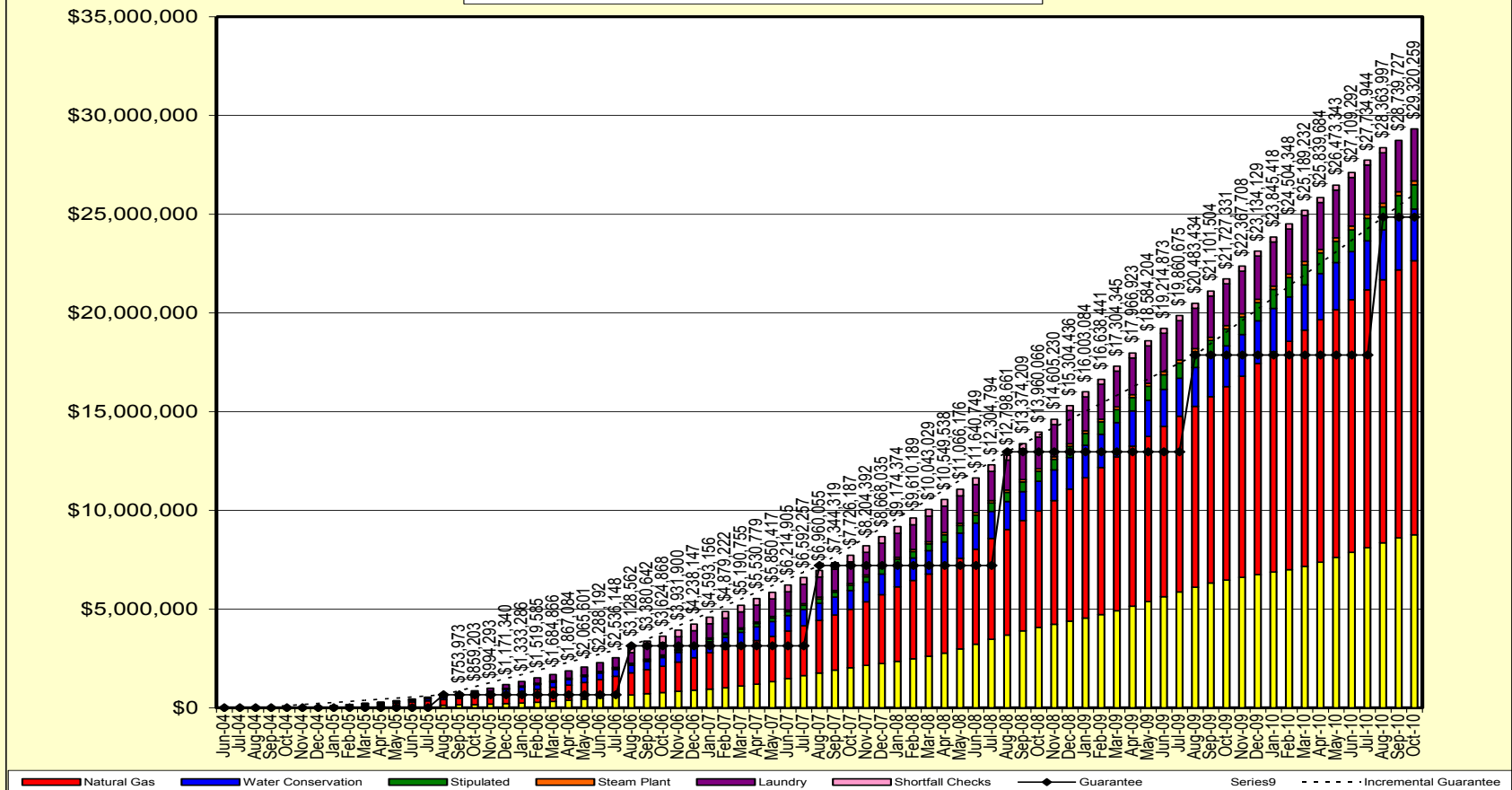
Detailed M&V

- Operations Assistance Includes
 - Regular on-site assistance
 - Periodic training
 - Operations and Maintenance consultation (24-7)
 - O&M costs under 5%
- Agency and ESCO Developed M&V
 - On-going communication
 - Worked together to achieve best possible result
 - Independently verified baseline models
 - Developed metrics to perform spot checks



Cumulative Savings

HHSC - All Phases
Cumulative Savings vs. Guarantee



All Phases: Savings To-Date

Phase	Cumulative Measured Savings	Cumulative Guarantee	Savings Began
1	\$8.13 million	\$7.22 million	June-04
2	\$5.09 million	\$5.02 million	August-05
3	\$5.64 million	\$5.06 million	April-06
4	\$3.87 million	\$3.19 million	November-06
5	\$3.88 million	\$2.94 million	June-07
6	\$2.36 million	\$2.40 million	July-05
7	\$2.50 million	\$1.93 million	June-07
Total	\$31.47 million	\$27.76 million	



Lessons and Challenges

- Some plant personnel need more attention
- New personnel – need to be informed
- Some believe that ESPC is a fix all
- Agency issues with some boilers failing
- Issues with third party energy management systems
- Savings and guarantee are very close when including M&V costs – may erode further
- State audit
- Billing for PASS - complicated process within HHSC



Program Enhancements

- Webinars for new administration and plant personnel
 - Discuss what performance contracting is and isn't
 - Share roles and responsibilities
- Partnering
 - Prior to construction
 - Prior to performance period
- Local Energy Manager on-site
 - Share ideas and information
 - Employee awareness program



Going Forward

- In-house project savings subtracted from ESPC savings
- Seek out utility rebates
- Demand response program
- Hobo loggers



Summary

- HHSC is a large state agency with significant challenges to maintain facilities
- HHSC chose ESPC as the solution to rebuild the facility infrastructure and achieve energy efficiency
- M&V Plan requires measured performance and independent verification
- This structure provides savings and measurement based assurance that the savings will continue

